

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/IB2004/050263

A. CLASSIFICATION OF SUBJECT MATTER	IPC 7 H01Q3/26	H01Q3/22	H01Q21/08	H01Q21/22
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According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 H01Q H04B G01S

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 726 662 A (HOPWOOD FRANCIS W) 10 March 1998 (1998-03-10) column 1, line 55 – column 2, line 45 column 3, line 54 – column 5, line 10; figures 1-5 ----- US 4 743 911 A (EVANS GARY E) 10 May 1988 (1988-05-10) abstract column 1, line 5 – column 2, line 20 column 3, line 51 – column 6, line 23; figures 3-7 ----- US 6 087 986 A (MUKAI MANABU ET AL) 11 July 2000 (2000-07-11) column 2, line 30 – column 3, line 22; figures 1-19 ----- -/-	1,6,10, 14
X		1,6
A		1,6,10, 14

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

° Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the International filing date
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- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the International filing date but later than the priority date claimed

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- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
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Date of the actual completion of the international search

24 June 2004

Date of mailing of the international search report

02/07/2004

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3 911 442 A (HATCH WILLIAM B) 7 October 1975 (1975-10-07) abstract; figures 1-4 -----	1,6
A	US 2002/105463 A1 (VAIL DAVID KENYON ET AL) 8 August 2002 (2002-08-08) abstract; figures 1-4 -----	1,6
P,A	US 2003/142015 A1 (BOE ERIC N ET AL) 31 July 2003 (2003-07-31) column 1, paragraph 2 - paragraph 5; figures 1-4 -----	1,6

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Patent document cited in search report		Publication date	Patent family member(s)		Publication date
US 5726662	A	10-03-1998	NONE		
US 4743911	A	10-05-1988	NONE		
US 6087986	A	11-07-2000	JP	3497672 B2	16-02-2004
			JP	10093323 A	10-04-1998
US 3911442	A	07-10-1975	NONE		
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